IN THE CLAIMS

Please amend the claims to read as follows:

Listing of Claims

1-7. (Canceled).

8. (New) A coding apparatus comprising:

a coder that encodes transmission data and outputs a plurality of parity bits for one systematic bit;

a modulation scheme instructor that applies a modulation scheme with a larger modulation M-ary number to the parity bits than to the systematic bits;

a bit arrangement determiner that determines bit arrangements of the systematic bits and the parity bits according to the applied modulation scheme;

an arrangement axis exchanger that exchanges part of the bit arrangements so that the determined bit arrangements of the parity bits are different from one another;

a mapping section that performs symbol mapping on the systematic bits in the determined bit arrangements and performs symbol mapping on the parity bits in the exchanged bit arrangements; and

2

a transmitter that transmits the systematic bits and the parity bits subjected to mapping from a corresponding plurality of antennas.

9.   (New)   A coding apparatus comprising:

a coder that encodes transmission data and outputs systematic bits and parity bits;

a modulation scheme instructor that applies different modulation schemes to the systematic bits and the parity bits;

a bit arrangement determiner that determines bit arrangements of the systematic bits and the parity bits according to the applied modulation scheme;

an arrangement axis exchanger that exchanges arrangement axes of coordinates to perform the determined bit arrangements;

a mapping section that performs symbol mapping on the systematic bits and the parity bits at the bit arrangements on the coordinates after the arrangement axes are exchanged; and

a transmitter that transmits the systematic bits and the parity bits subjected to mapping from a corresponding plurality of antennas.

10.   (New)   A coding apparatus comprising:

3

a coder that encodes transmission data and outputs systematic bits and parity bits;

a detector that detects the number of retransmissions of transmission data;

a modulation scheme instructor that applies different modulation schemes to the systematic bits and the parity bits;

a bit arrangement determiner that determines bit arrangements of the systematic bits and the parity bits according to the applied modulation scheme, and changes the bit arrangements of the systematic bits and the parity bits according to the detected number of retransmissions;

a mapping section that performs symbol mapping on the systematic bits and parity bits in the determined bit arrangements; and

a transmitter that transmits the systematic bits and parity bits subjected to mapping from a corresponding plurality of antennas.

11. (New) A coding method comprising the steps of:

encoding transmission data and outputting a plurality of parity bits for one systematic bit;

applying a modulation scheme with a larger modulation M-ary number to the parity bits than to the systematic bits;

4

determining bit arrangements of the systematic bits and the parity bits according to the applied modulation scheme;

exchanging part of the bit arrangements so that the determined bit arrangements of the parity bits are different one another;

performing symbol mapping on the systematic bits in the determined bit arrangements and performing symbol mapping on the parity bits in the exchanged bit arrangements; and

transmitting the systematic bits and the parity bits subjected to mapping from a corresponding plurality of antennas.

12.   (New)   A coding method comprising the steps of:

encoding transmission data and outputting systematic bits and parity bits;

applying different modulation schemes to the systematic bits and the parity bits;

determining bit arrangements of the systematic bits and the parity bits according to the applied modulation scheme;

exchanging arrangement axes of coordinates to perform the determined bit arrangements;

performing symbol mapping on the systematic bits and the parity bits in the bit arrangements on the coordinates after the arrangement axes are exchanged; and

transmitting the systematic bits and the parity bits subjected to mapping from a corresponding plurality of antennas.

13.   (New)   A coding method comprising the steps of:

encoding transmission data and outputting systematic bits and parity bits;

detecting the number of retransmissions of transmission data;

applying different modulation schemes to the systematic bits and the parity bits;

determining bit arrangements of the systematic bits and the parity bits according to the applied modulation scheme, and changing the bit arrangements of the systematic bits and the parity bits according to the detected number of retransmissions;

performing symbol mapping on the systematic bits and parity bits in the determined bit arrangements; and

transmitting the systematic bits and parity bits subjected to mapping from a corresponding plurality of antennas.